

STATE OF VERMONT
PUBLIC SERVICE BOARD

Docket No. 7542

Petition of Chaput Family Farms ("the Chaputs"))
for a Certificate of Public Good, pursuant to)
30 V.S.A. Section 248(j), authorizing the)
installation and operation of a farm-based)
methane-fueled electrical generating facility at the)
Chaput Family Farm located on Route 105 in)
North Troy, Vermont)

Order entered: 9/18/2009

I. INTRODUCTION

This case involves a petition filed by Chaput Family Farms ("the Chaputs") requesting a certificate of public good under 30 V.S.A. § 248(j) to install and operate a farm-based methane-fueled electrical generating facility at the Chaput Family Farms located in North Troy, Vermont. In today's Order, we conclude that the proposed project will be of limited size and scope; the petition does not raise a significant issue with respect to the substantive criteria of 30 V.S.A. § 248; the public interest is satisfied by the procedures authorized by 30 V.S.A. § 248(j); and the proposed project will promote the general good of the state.

II. PROCEDURAL HISTORY

On June 15, 2009, the Chaputs filed a petition with the Public Service Board ("Board") requesting a certificate of public good under 30 V.S.A. § 248(j) to install and operate a farm-based methane-fueled electrical generating facility at the Chaput Family Farm located on Route 105 in North Troy, Vermont. The generating facility would be interconnected with Vermont Electric Cooperative, Inc.'s ("VEC") distribution system. The Chaputs submitted prefiled testimony, proposed findings, and a proposed order pursuant to the requirements of 30 V.S.A. § 248(j).

Notice of the petition was sent on July 30, 2009, to all entities specified in 30 V.S.A. § 248(a)(4)(c) and other interested parties. The notice stated that any party wishing to submit comments as to whether the petition raises a significant issue with respect to the substantive criteria of 30 V.S.A. § 248 needed to file comments with the Board on or before August 31,

2009. A similar notice of the filing was published in *The Newport Daily Express* on August 3, 2009, and August 10, 2009.

In a July 30, 2009, memorandum, the Board requested additional information. On August 19, 2009, the Chaputs filed a letter in response to that request.¹ In that filing, the Chaputs made a modification to the prefiled testimony of Reg Chaput, with regard to how the farm intends to sell the energy to be generated on the farm.

On August 28, 2009, the Vermont Department of Public Service ("Department") filed a letter stating that the petition does not raise a significant issue with respect to the criteria of Section 248 and a certificate of public good should be issued. On September 2, 2009, the Agency of Natural Resources ("ANR") filed notice with the Board that it had no comments on the petition.

III. FINDINGS

1. The petitioner is a family farm owned by members of the Chaput family located on Route 105 in North Troy, Vermont. The petitioner is a partnership as defined by 30 V.S.A. § 201, and is subject to the Board's jurisdiction. Petition at 1; Chaput pf. at 1-2.

2. The proposed project will involve the construction of an enclosed, concrete anaerobic digester vessel to convert raw manure and other agricultural-based substrates, from sources on- and off-site, into methane gas, nutrient rich liquids, and clean solids. The liquid will be spread as fertilizer, and the solids used as bedding for cows. The methane produced will be used to fuel a 300 kW generator to produce electricity. Chaput pf. at 3-4.

3. The proposed digester will primarily use manure produced on the farm. Other digester substrates may include manure from other farms, waste grain, food waste, waste dairy products, and waste crops or crops grown specifically to use in the digester. The proposed project will involve the importation of up to ten truckloads of off-farm substrate per month. Chaput pf. at 3-4, and 10.

1. August 19, 2009, letter from Ebenezer Punderson, Esq., on behalf of the Chaputs to Susan M. Hudson, Clerk of the Board ("Chaput letter").

4. The proposed project will include the construction of an enclosed, circular, concrete manure digester tank with insulated floating cover, 98 feet in diameter and 16 feet in height. The proposed construction will include a new utility building to house the generating equipment, constructed as an addition, with dimensions of 30 feet by 50 feet, off the side of an existing shop. A second building to house a separator and store separated solids is proposed to be constructed near the digester, with a dimension of 40 feet by 70 feet. An effluent tank, about 12 feet by 12 feet, and two scrubber tanks, about 6 feet in diameter, are also proposed to be constructed next to the digester. Chaput pf. at 2; exhs. A and B.

5. An existing distribution line on Route 105 will be upgraded by VEC for the proposed project. VEC will rebuild approximately 2,300 feet of existing single-phase line to three-phase line. No modifications to the existing poles will be made, except the addition of crossarms and two phase wires. Denis pf. at 2 and 4.

6. VEC will install approximately 100 feet of three-phase 12.47 kV underground line on the Chaput property, beginning at the end of the upgraded line on Route 105 and ending at the pad-mounted generator step-up transformer. One new pole, less than 5 feet taller than the existing distribution poles, will be installed on Route 105 at the start of the underground line. This pole will support an electronic line recloser, a load-break switch, and the conduit risers to connect the underground system. The recloser will be controlled from VEC's dispatch center in Johnson by a supervisory controlled and data acquisition system. Denis pf. at 2; Chaput letter at 1.

7. The proposed project is intended to be a Sustainably Priced Energy Enterprise Development ("SPEED") resource so that it may qualify to sell the power at the standard offer prices under 30 V.S.A. § 8005(b)(2). The proposed project's environmental attributes, distinct from the electrical output, will be sold under a separate agreement to Central Vermont Public Service Corporation ("CVPS"). Chaput pf. at 4; Chaput letter at 2.

Orderly Development of the Region

[30 V.S.A. § 248(b)(1)]

8. The proposed project will not unduly interfere with the orderly development of the region, with due consideration having been given to the recommendations of the municipal and regional planning commissions, the recommendations of municipal legislative bodies, and the land conservation measures contained in the plan of any affected municipality. This finding is supported by findings 9 and 10, below.

9. The proposed project will be on farm property owned by the Chaputs in a location that will be compatible with other nearby large farm buildings. Chaput pf. at 2.

10. The Troy Planning Commission has endorsed the proposed project as being consistent with the Troy Town Plan. The Northeastern Vermont Development Association has endorsed the proposed project as conforming to the Northeastern Regional Plan. Chaput pf. at 5.

Need for Present and Future Demand for Service

[30 V.S.A. § 248(b)(2)]

11. The proposed project is required to meet the need for present and future demand for service which could not otherwise be provided in a more cost-effective manner through energy conservation programs and measures and energy efficiency and load management measures. This finding is supported by findings 12 through 14, below.

12. The proposed project is intended to be a SPEED resource so that it may sell the power to meet the regional need for electricity. Chaput pf. at 5; Chaput letter at 2.

13. The renewable energy attributes associated with the electrical output of the proposed project will be sold to CVPS as part of the utility's voluntary renewable pricing program under its Cow Power Program. Chaput pf. at 5.

14. The State of Vermont, as a matter of public policy, encourages development of renewable energy sources. Chaput pf. at 5.

System Stability and Reliability

[30 V.S.A. § 248(b)(3)]

15. The proposed project will not adversely affect system stability and reliability. This finding is supported by findings 16 and 17, below.

16. The proposed project will be interconnected at 12.47 kV with a VEC distribution system that originates at VEC's North Troy substation. A system impact study indicates, with the improvements set forth in the study, the proposed project will not have any undue adverse impacts on system stability or reliability. Chaput pf. at 5; exh. E; Chaput letter at attachment 1.

17. The system impact study for the proposed project identifies twelve additional analyses and upgrades that are required to assure that the operation of the new generators at the Chaput facility do not have any undue adverse impacts on system stability and reliability. The Chaputs propose that the additional analyses and upgrades be imposed as conditions to the certificate of public good. Chaput pf. at 5-7; exh. E at 13; Chaput letter at attachment 1.

Economic Benefit to the State

[30 V.S.A. § 248(b)(4)]

18. The proposed project will have an economic benefit to the State by providing renewable in-state generation, enhancing the State's energy diversity. The proposed project will enhance the economic viability of the Chaput farm and all the ancillary services associated with the farm. Chaput pf. at 7.

**Aesthetics, Historic Sites, Air and Water Purity,
the Natural Environment and Public Health and Safety**

[30 V.S.A. § 248(b)(5)]

19. The project, as proposed, will not have an undue adverse effect on aesthetics, historic sites, air and water purity, the natural environment and public health and safety. This finding is supported by findings 20 through 45, below, which are the criteria specified in 10 V.S.A. §§ 1424(a)(d) and 6086(a)(1)-(8)(a) and (9)(k).

Outstanding Resource Waters

[10 V.S.A. § 1424(a)(d)]

20. The proposed project will not be located on or anywhere near any segment of any outstanding resource waters of the State. Chaput pf. at 8.

Air Pollution

[10 V.S.A. § 6086(a)(1)]

21. The proposed project will not result in undue air pollution. This finding is supported by findings 22 through 25, below.

22. In a letter dated April 29, 2009, the Air Pollution Control Division of ANR has determined that the engine, back-up flare, and exhaust-stack configuration for the proposed project meet ANR requirements and do not require an Air Pollution Control Permit. ANR has imposed four conditions for operating the engine and the flare as part of that determination. Chaput pf. at 8; exh. F.

23. The proposed project will greatly reduce pathogens and odor in the farm manure through the digestion process, and result in the reduction of the release of greenhouse gases through the use of the methane to generate power. Chaput pf. at 3 and 7.

24. The proposed project will include a new utility building to house the reciprocating engine and generating equipment, minimizing noise. Chaput pf. at 2-3 and 9.

25. The construction of the proposed project will require limited earth disturbance and will not involve excessive dust, smoke, odors, or noise. Denis pf. at 3.

Water Pollution

[10 V.S.A. § 6086(a)(1)]

26. The proposed project will not result in undue water pollution. This finding is supported by finding 27 and by the specific findings under the criteria of 10 V.S.A. §§ 6086(a)(1)(A) through (G), below.

27. The proposed project, through the digestion process, will enable the conversion of raw manure into a liquid waste that results in an ammonia-rich fertilizer that is more readily absorbed by crops improving the quality of the runoff from the farm fields. Chaput pf. at 3 and 8.

Headwaters

[10 V.S.A. § 6086(a)(1)(A)]

28. The proposed project is not located in a headwaters area. Chaput pf. at 9; Denis pf. at 3.

Waste Disposal

[10 V.S.A. § 6086(a)(1)(B)]

29. The proposed project will meet applicable health and environmental conservation regulations regarding the disposal of wastes. Any wastes produced during construction will be disposed of in an approved landfill. The proposed project will result in the improved treatment of farm manure waste. Chaput pf. at 9; Denis pf. at 3.

Water Conservation

[10 V.S.A. § 6086(a)(1)(C)]

30. The proposed project will not require a new water supply and will not have an impact on existing water use. Chaput pf. at 9.

Floodways

[10 V.S.A. §§ 6086(a)(1)(D)]

31. The proposed project is not located within a floodway or floodway fringe. Chaput pf. at 9; exh. G.

Streams

[10 V.S.A. §§ 6086(a)(1)(E)]

32. The proposed project will have no impact on streams, since no improvements will be located on the banks of a stream. Chaput pf. at 9; Denis pf. at 3.

Shorelines

[10 V.S.A. §§ 6086(a)(1)(F)]

33. The proposed project is not located near a shoreline. Chaput pf. at 9-10; Denis pf. at 3.

Wetlands

[10 V.S.A. § 6086(a)(1)(G)]

34. The proposed project will not impact wetlands. There are wetlands located on the farm property but no development or farm operations associated with the proposed project will occur on or in the vicinity of the wetlands. Chaput pf. at 10; Denis pf. at 3.

Sufficiency of Water and Burden on Existing Water Supply

[10 V.S.A. §§ 6086(a)(2)&(3)]

35. The proposed project will not require the use of additional water and therefore will not place a burden on the existing water supply. Chaput pf. at 10.

Soil Erosion

[10 V.S.A. § 6086(a)(4)]

36. The proposed project will not cause an adverse impact on soil erosion. The sitework for the proposed project will be located within the farmstead, in a relatively flat area, and the existing topography will not be altered. Any soil disturbance will be limited to the farmstead complex, the placement of a new utility pole, and installation of 100 feet of underground distribution line. Chaput pf. at 10; Denis pf. at 4.

Transportation Systems

[10 V.S.A. § 6086(a)(5)]

37. The proposed project will not cause unreasonable congestion or unsafe conditions with respect to transportation systems. If the proposed digester only uses manure from the farm, there will be a net decrease in the truck deliveries to the farm resulting from the avoidance of sawdust

bedding imports. If all the substrate for the digester is imported and the sawdust deliveries are eliminated, there will be a net increase of four truck deliveries per month, about a five percent increase in truck traffic to the farm. The proposed project will involve the importation of up to ten truckloads of off-farm substrate per month. Chaput pf. at 10-11; Denis pf. at 4.

Educational Services

[10 V.S.A. §§ 6086(a)(6)]

38. The proposed project will not cause an unreasonable burden on educational services. Chaput pf. at 11.

Municipal Services

[10 V.S.A. §§ 6086(a)(7)]

39. The proposed project will not cause an unreasonable burden on municipal services. Chaput pf. at 11.

**Aesthetics, Historic Sites
and Rare and Irreplaceable Natural Areas**

[10 V.S.A. § 6086(a)(8)]

40. The proposed project will not have an undue adverse impact on the scenic or natural beauty, aesthetics, historic sites, or rare and irreplaceable natural areas. This finding is supported by findings 41 through 43, below.

41. All of the proposed project improvements are to be located within an existing farmstead, and the new buildings will be compatible in design and appearance with the existing farm buildings. Chaput pf. at 2-3 and 11.

42. The proposed distribution line upgrade will include the addition of crossarms and two phase wires and one new pole. No other modifications will be made to the existing poles. Thus, the changes in appearance of the distribution line will be minimal. Denis pf. at 2 and 4.

43. There are no known archeological or historic sites or rare and irreplaceable natural areas in the vicinity of the proposed project. Denis pf. at 4-5.

Necessary Wildlife Habitat and Endangered Species

[10 V.S.A. § 6086(a)(8)(A)]

44. The proposed project will not have any adverse impacts on wildlife habitats or threatened or endangered species. There are no known endangered species within the proposed project area. Chaput pf. at 11; Denis pf. at 5.

Development Affecting Public Investments

[10 V.S.A. § 6086(a)(9)(K)]

45. The proposed project will not unnecessarily or unreasonably endanger the public or quasi-public investments in any governmental public utility facilities, services, or lands, or materially jeopardize or interfere with the function, efficiency, or safety of the public's use or enjoyment of or access to such facilities, services, or lands. There are no public lands in the vicinity of the proposed project, except for Route 105 which will not be adversely affected by the proposed project. Chaput pf. at 11-12; Denis pf. at 4.

Least-Cost Integrated Resource Plan

[30 V.S.A. § 248(b)(6)]

46. The Chaputs do not distribute or transmit electricity to the public and are not required to prepare an integrated resource plan pursuant to 30 V.S.A. § 218c. Chaput pf. at 12.

Compliance with Electric Energy Plan

[30 V.S.A. § 248(b)(7)]

47. The proposed project is consistent with the *Vermont Electric Plan* because it fulfills the need for electric service that is "carefully balanced" between the following goals: "efficient, adequate, reliable, secure, sustainable, affordable, safe and environmentally sound, while encouraging the state's economic vitality and maintaining consistency with other state policies." Chaput pf. at 12.

48. The Department filed a determination on September 4, 2009, that the proposed project is consistent with the *Vermont Electric Plan*, in accordance with 30 V.S.A. § 202(f).

Outstanding Resource Waters

[30 V.S.A. § 248(b)(8)]

49. The proposed project will not be located on or anywhere near any segment of any outstanding resource waters. Chaput pf. at 13.

Existing or Planned Transmission Facilities

[30 V.S.A. § 248(b)(10)]

50. The proposed project can be served economically by existing or planned transmission facilities without undue adverse impact on Vermont utilities or customers. Chaput pf. at 13.

IV. CONCLUSION

Based upon all of the above evidence, we conclude that the proposed project will be of limited size and scope; the petition does not raise a significant issue with respect to the substantive criteria of 30 V.S.A. § 248; the public interest is satisfied by the procedures authorized by 30 V.S.A. § 248(j); and the proposed project will promote the general good of the state.

V. ORDER

IT IS HEREBY ORDERED, ADJUDGED AND DECREED by the Public Service Board of the State of Vermont that:

1. The proposed installation and operation of a farm-based methane-fueled electrical generating facility at the Chaput Family Farms located on Route 105 in North Troy, Vermont, will promote the general good of the State of Vermont in accordance with 30 V.S.A. Section 248, and a certificate of public good to that effect shall be issued.
2. Construction shall be in be in accordance with the plans as submitted in these proceedings. Any material deviation from these plans must be approved by the Board.

3. The Chaput Family Farms shall complete the twelve additional analyses and upgrades that the system impact study for the proposed project identified as necessary to assure that the operation of the new generators to not have any undue adverse impacts on system stability and reliability.
4. The Chaput Family Farms shall pay the entire cost of the distribution system upgrades.
5. The Chaput Family Farms shall comply with the four conditions for operating the engine and the flare established by the Air Pollution Control Division of the Agency of Natural Resources in a letter dated April 29, 2009.
6. Truck deliveries to the Chaput Family Farms shall include no more than ten truckloads per month of agricultural-based substrate for use in the farm digester.

Dated at Montpelier, Vermont this 18th day of September, 2009.

<u>s/James Volz</u>)	
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<u>s/David C. Coen</u>)	PUBLIC SERVICE
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)	OF VERMONT
<u>s/John D. Burke</u>)	

OFFICE OF THE CLERK

FILED: September 18, 2009

ATTEST: s/Susan M. Hudson
Clerk of the Board

Notice to Readers: This decision is subject to revision of technical errors. Readers are requested to notify the Clerk of the Board (by e-mail, telephone, or in writing) of any apparent errors, in order that any necessary corrections may be made. (E-mail address: psb.clerk@state.vt.us)

Appeal of this decision to the Supreme Court of Vermont must be filed with the Clerk of the Board within thirty days. Appeal will not stay the effect of this Order, absent further Order by this Board or appropriate action by the Supreme Court of Vermont. Motions for reconsideration or stay, if any, must be filed with the Clerk of the Board within ten days of the date of this decision and order.